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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,635	07/15/2003	Klaus R. Moeller	23390-000120/US	5657

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EXAMINER	
FAULK, DEVONA E	

ART UNIT	PAPER NUMBER
2615	

DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/618,635	MOELLER ET AL.	
	Examiner	Art Unit	
	Devona E. Faulk	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 July 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Terminal Disclaimer

1. The terminal disclaimers filed on 1/4/2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on 09/791802 and 10/646734 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Response to Arguments

2. Applicant's arguments, filed 1/4/2006, with respect to the rejection(s) of claim(s) 1-22 under 102(b) and 103(a) , with regards to amended claim language, have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Anderson. The new ground of rejection was necessitated by the amendment.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 1-7,9-11,14-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Orfield (US 4,319,088) in view of Anderson et al. (US 5,406,634).

Claims 1,15 and 19 share common features.

Regarding **claims 1,15 and 19**, Orfield discloses a sound masking system for controlling the ambient noise level in a physical environment, said sound masking system comprising:

(a) a communication network spanning at least a portion of said physical environment (Figure 3) (communication is defined as the exchange of thoughts, messages, or information as by speech, signals, writing or behavior; network is defined as a group of system of electric components and connecting circuitry designed to function in a specific manner);

(b) a plurality of sound masking units (16, Figure 3; column 4, lines 36-40;Figures 1,4-6), some of said sound masking units including a communication interface (jacks 70, 71) for coupling said sound masking units to said communication network for receiving signals over said communication network (column 4, lines 42-50).

Orfield discloses a control unit.

Orfield does not expressly disclose receiving and transmitting control signals over said communication network; and said control unit having a communication interface for coupling said control unit to said communication network for transmitting signals over said communication network to said sound masking units, and said signals including control signals for selectively controlling the operation of said sound masking units and one or more sound masking signals for producing a sound masking output at one or more of said selected sound masking units and a program controller for controlling operating of said sound masking unit.

Anderson discloses an intelligent speaker unit for a speaker system network comprising a plurality of speaker units including a communication interface for coupling said speaker unit (i.e. sound masking units) to said communication network for receiving and transmitting control signals over said communication network (Figure 1; column 3, lines 56-62); a programmable controller (Figures 2 and 7) for controlling operation of said sound masking unit (Figure 5) and said programmable controller being coupled to said communication network for receiving control signals from said communication network for altering the operation of said sound masking units (Figures 1,2 and 7); and a control unit, said control unit having a network interface for coupling said control unit to said communication network for transmitting control signals over said communication network to said speaker units (i.e. sound masking units), and said control signals including signals for selectively controlling the operation of said sound masking units (Figure 1; column 2, lines 55-64; column 3, lines 33-62) in order to allow an operator to remotely control the plurality of speaker units, which provide ease of adjusting a plurality of parameters such as volume, speaker equalization, and sound delay at a desired time; to receive status and/or control information from the speaker unit; and to provide more flexibility in a speaker system network, or in multiple networks or zones, rather than all speakers in a network or zone. Therefore it would have been obvious to one having ordinary skill in the art to modify Orfield with the teaching of Anderson to utilize a intelligent speaker unit for use in a speaker network system (such as speaker system of Orfield) comprising: a control unit to transmit control data (audio data does not need to be transmitted to the speaker unit because the speaker unit of Orfield comprising a

sound generator which provide an audio data to a digital signal processor) to a plurality of intelligent speaker units (i.e. sound masking units), wherein the intelligent speaker unit comprising a receiver for receiving the control data and a transmitter for transmitting status and/or control information from the sound masking unit to the control unit in order to allow an operator to remotely control the plurality of speaker units, which provide ease of adjusting a plurality of parameters such as volume, speaker equalization, and sound delay at a desired time; to receive status and/or control information form the speaker unit; and to provide more flexibility in a speaker system network by allowing an operator to transmit a message to only selected speakers in a network, or in multiple networks or zones, rather than all speakers in a network or zone. Therefore, Orfield as modified does not need to make adjustments through potentiometers, which are on the sound masking unit located in the ceiling, it can be adjusted by utilizing the control unit which allows an operator to make adjustments remotely to only the selected sound masking units in the network, or in multiple networks or zones, rather than all speakers in a network or zone.

Additionally, regarding **claim 15**, Orfield as modified discloses said sound masking unit includes an equalizer for receiving said audio signal and generating an audio output signal with a predetermined contour, and an output amplifier for amplifier for amplifying said audio output signal, and said programmable controller including a component for altering the contour of said audio output signal in response to a control signal (Orfield , Figures 1-2; Andersen, Figures 2,4-5 and 7 and column 3, lines 56-62).

Additionally, regarding **claim 19** Orfield as modified discloses said control unit including an address generator for assigning addresses to said sound masking units(Anderson, abstract; column 4, lines 47-57).

Regarding **claim 2**, Orfield as modified discloses wherein said communication interface comprises an address component for recognizing signals intended for the sound masking unit associated with said address component (Anderson, abstract; column 4, lines 47-57).

Regarding **Claim 3,** Orfield as modified discloses said control unit includes an address generator for assigning addresses to said sound masking units (Anderson, abstract; column 4, lines 47-57).

Regarding **Claim 4**, Orfield as modified discloses said address generator comprises a component for generating a logical address for each of said sound masking units, and said logical address being derived from an identifier associated with each of said sound masking units (Anderson, abstract, column 4, lines 47-57).

Regarding **claim 5**, Orfield as modified discloses further including a computer (Anderson, Figure 1; column 3, lines 33-48), and said control unit having a communication interface for receiving adjustment signals from said computer (Anderson Figure 1), and said control unit including a component for converting said adjustment signals into control signals for controlling characteristics of said sound masking output (Anderson, Figure 1; column 3, lines 33-48; column 5, lines1-11).

Regarding **claims 6,** Orfield as modified discloses wherein said sound masking units include an equalizer for adjusting spectral characteristics of said sound masking

output in response to a spectral control signal (Anderson, Figures 4 and 5; column 2, lines 55-64).

Regarding **claim 7**, Orfield as modified discloses wherein said computer includes a component for receiving sound level readings for the physical environment and a component for generating an equalizer adjustment signal derived from said sound level readings, and said control unit being responsive to said equalizer adjustment signal for generating said spectral control signal.

Orfield as modified discloses spectrum analyzers which provide a graphic analysis of amplitudes within various frequency ranges of the audible spectrum (Orfield, column 5, lines 13-28; column 6, lines 10-41) and a computer (Anderson, Figure 1), but does not expressly disclose said computer includes a component for receiving sound level readings for the physical environment and a component for generating an equalizer adjustment signal derived from said sound level readings, and said control unit being responsive to said equalizer adjustment signal for generating said spectral control signal.

Anderson discloses a computer performing the processing need to output control signals (i.e. adjustment signal) that are transmitted remotely to the speaker unit, which provides ease of adjusting a plurality of parameters to obtain the desired output at a desired time. Therefore, it would have been obvious to one or ordinary skill in the art to modify Orfield as modified with the teaching of Anderson to incorporate the spectrum analyzer in order to make adjustments needed to obtain the desired output with more precision, wherein the computer provides control signals to the sound masking unit

remotely and without having to plot the spectrum analysis on blueprint and manually adjust the potentiometer on the sound masking unit located in the ceiling, which provides ease of adjusting a plurality of parameters to obtain the desired output at a desired time. Therefore Orfield as modified discloses said computer including a component for receiving sound level readings for the physical environment and a component for generating an equalizer adjustment signal derived from said sound level readings, and said control unit being responsive to said equalizer adjustment signal for generate said spectral control signal.

Regarding **claim 9**, Orfield as modified discloses said control unit comprises a computer (Anderson, Figure 1), and said computer including a component for receiving sound level readings for the physical environment and a component for generating a spectrum adjustment command in response to said sound level readings, and said computer transmitting said spectrum adjustment command to one or more of said sound masking units for adjusting the spectrum of said sound masking output (Orfield, column 5, lines 13-28; column 6, lines 10-41; Anderson, abstract; Figure 1; column 3, lines 33-48).

Regarding **claim 10**, Orfield as modified discloses wherein said computer includes a component for receiving sound level readings for the physical environment and a component for generating a volume level adjustment signal and said control unit being responsive to said volume level adjustment signal for adjusting the volume of said sound masking output (Orfield; column 5,lines 13-28;column 6, lines 10-41; Anderson, abstract; Figure 1; column 3, lines 33-48).

Regarding **claim 11**, Orfield as modified discloses further including a sound-masking module for generating one or more of said sound masking signals for transmission to selected ones of said sound masking units. (Orfield , Figure 1).

Claim 14 is similar to claim 12 and is rejected for the reasons stated above apropos for claim 12.

Regarding **claim 16**, Orfield as modified discloses wherein said sound masking system comprises an equalizer component for generating said audio output signal with programmable spectral characteristics in response to a control signal from said programmable controller (Anderson, Figures 1,2,5 and 7).

Claim 17 is similar to claims 7 and 9 and is rejected for the reasons stated above apropos for claims 7.

Regarding **claim 18**, Orfield discloses wherein said communication interface comprises an address component for recognizing control signals intended for the sound masking unit associated with said address component, and said programmable controller including a component for decoding said control signals and applying one or more decoded signals for controlling operation the said sound masking unit (Anderson, abstract; Figures 1,2 and 7; column 4, 12-57).

Claim 20 is similar to claim 4 and is rejected for the reasons stated above apropos for claim 4.

5. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Orfield (US 4,319,088) in view of Anderson et al. (US 5,406,634) in further view of Inami et al. (US 4,612,665).

Regarding **claim 8**, Orfield as modified discloses a spectrum analyzer, but only generally; no specific hardware or software is taught. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to seek know spectrum analyzer system. Inami discloses a spectrum analyzer, wherein the spectrum analyzer receives signals from a microphone (column 2, line 57 to column 3, line 2). It would have been obvious to one having ordinary skill in the art to employ any known spectrum analyzer. Therefore, it would have been obvious to one of ordinary skill in the art at the tine of the invention to modify Orfield as modified with the teaching of Inami to utilize a spectrum analyzer, which receives input signals from a microphone (i.e. said component for receiving sound level readings comprises a microphone).

6. **Claims 12,13,21 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Orfield (US 4,319,088) in view of Anderson et al. (US 5,406,634) in further view of Ito et al. (US 5,826,172).

Regarding **claim 12**, Orfield as modified discloses a paging component (column 4, lines 42-53) but does not expressly disclose said paging component comprises a plurality of input ports for receiving a plurality of paging signals, and a selector coupled to said input ports for selecting one or more of said paging signals and a routing component for routing said selected paging signals over said communication network and one or more of said sound masking units inputting one of said selected paging signals for announcement in response to a control command received from said control unit.

Ito discloses a paging system having a plurality of input ports for receiving a plurality of paging signals (Figure 1;column 4, line 65–column 5, line 34; abstract) and selectively paging. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Orfield as modified, using the teaching of Ito, to 1utilize a paging component comprising a plurality of input ports for receiving a plurality of paging signals, and a selector coupled to said input ports for selecting one or more of said paging signals in order to provide the system with the flexibility of receiving one of a plurality of input signals from a variety of input devices and to utilize a selector to provide one of the plurality of input signals as a paging signal to the desired sound masking units.

All elements of **claim 13** are comprehended by the rejection of claim 12. Claim 13 is rejected for reasons state above apropos of claim 1 and 12.

Claim 21 is similar to claim 12 and is rejected for the reasons stated above apropos for claim 12.

Claim 22 is similar to claim 13 and is rejected for the reasons given above apropos for claim 13.

Claim Objections

7. **Claim 22** is objected to because of the following informalities: Claim 22 recites "the networked sound masking system as claimed in claim 21" but claim 21 recites "the networked sound masking system". Appropriate correction is required.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devona E. Faulk whose telephone number is 571-272-7515. The examiner can normally be reached on 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DEF

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